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American Academy of Actuaries

June 22, 2010
Ms. Anne Kelly, Chair
Property and Casualty Risk-Based Capital Working Group
Capital Adequacy (E) Task Force
Mr. Lou Felice, Chair
Capital Adequacy (E) Task Force
National Association of Insurance Commissioners
2301 McGee Street
Suite 800
Kansas City, MO 64108

## Re: Risk-Based Capital Underwriting Factors - 2010 Update - Addendum Using 5 Percent Cap

Dear Ms. Kelly and Mr. Felice:
On behalf of the American Academy of Actuaries, ${ }^{1}$ Property and Casualty Risk-Based Capital (RBC) Committee, I am pleased to provide this addendum to our March 2010 Update. The March 2010 Update provided underwriting factors calculated by line using an approach similar to that employed in past years, with factor changes capped at 15 percent. The purpose of this addendum is to provide updated factors using a 5 percent cap in response to a request by the Property and Casualty Risk-Based Capital Working Group.

Similar to our conclusions in March, we found the weighted aggregate impact of the indicated factors before covariance and companies' own experience capped at 5 percent remains small, at nearly zero percent, with a 3 percent increase in the reserve charge offsetting a nearly 4 percent decrease in the premium charge. Most of the factors, by count and by weighted RBC charge, are capped.

Changes experienced by insurers in certain segments are greater in magnitude, with both increases and decreases, as shown in Exhibit III, which illustrates the impact of the change in factors before the covariance adjustment and companies' own experience by line groupings. In

[^0]particular, the indicated capped reserve charge increases 5 percent for the reinsurance lines and 4.4 percent for most commercial lines, while it decreases nearly 5 percent for personal lines. The indicated capped premium charge increases 5 percent for the reinsurance lines, while it decreases nearly 5 percent for most commercial and personal lines.

Aside from the size of the cap, the comments included in the March letter are equally applicable to this addendum. In particular, although data was not credible for the financial \& mortgage guaranty line, the indicated factors for this line were increased by the 5 percent cap to reflect the high level of inherent risk in this line that is not reflected in the current factors.

We are pleased to assist the NAIC by providing this addendum. If you have any questions, please feel free to contact Lauren Pachman, the Academy's casualty policy analyst, at pachman@actuary.org. Please feel free to seek our assistance in the future.

Sincerely,

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Alex Krutov, Chair
American Academy of Actuaries’ P/C Risk-Based Capital Committee

[^1]
## American Academy of Actuaries <br> Exhibit I <br> PIC Risk-Based Capital Committee's Subgroup on Pricing \& Reserving Charges Summary of Results

| Line | Line Letter | Reserving Runoff Ratio |  |  | 11 O |  | Impact from Reserving |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Current | Before Cap and Min | Indicated | Current | Indicated |  |
| (1) H/F | A | 0.206 | 0.201 | 0.201 | 0.939 | 0.938 | -4.5\% |
| (2) PPA | B | 0.199 | 0.124 | 0.192 | 0.927 | 0.928 | -5.0\% |
| (3) CA | C | 0.238 | 0.230 | 0.230 | 0.909 | 0.911 | -3.8\% |
| (4) WC | D | 0.310 | 0.338 | 0.324 | 0.835 | 0.830 | 5.0\% |
| (5) CMP | E | 0.439 | 0.465 | 0.465 | 0.884 | 0.876 | 4.1\% |
| (6) MM Occurrence | F1 | 0.439 | 0.217 | 0.431 | 0.869 | 0.865 | -5.0\% |
| (7) MM CM | F2 | 0.283 | 0.309 | 0.306 | 0.893 | 0.883 | 5.0\% |
| (8) SL | G | 0.249 | 0.164 | 0.257 | 0.901 | 0.890 | -5.0\% |
| (9) OL | H | 0.478 | 0.529 | 0.511 | 0.862 | 0.852 | 5.0\% |
| (11) Spec Prop | I | 0.184 | 0.274 | 0.191 | 0.966 | 0.966 | 5.0\% |
| (12) Auto Phys Damage | J | 0.118 | 0.000 | 0.112 | 0.975 | 0.976 | -5.0\% |
| (10) Fidelity \& Surety | K | 0.315 | 0.307 | 0.325 | 0.957 | 0.940 | -5.0\% |
| (13) Other | L | 0.183 | 0.153 | 0.172 | 0.964 | 0.967 | -5.0\% |
| (15) International | M | 0.327 | 0.327 | 0.327 | 0.877 | 0.874 | -2.4\% |
| (16) Rein Property \& Financial | N\&P | 0.278 | 0.580 | 0.286 | 0.901 | 0.901 | 5.0\% |
| (17) Reinsurance Liab | $\bigcirc$ | 0.750 | 1.357 | 0.769 | 0.834 | 0.838 | 5.0\% |
| (18) Products Liability | R | 0.627 | 1.414 | 0.643 | 0.838 | 0.841 | 5.0\% |
| (14) Fin \& Mort | S | 0.150 | 0.150 | 0.200 | 0.962 | 0.926 | 5.0\% |
| (19) Warranty | T | 0.315 | 0.307 | 0.325 | 0.957 | 0.940 | -5.0\% |
|  |  |  |  |  |  |  | 3.0\% |


| Line | Line Letter | Loss \& LAE Ratio |  |  | 110 |  | Impact from Premium |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Current | Before Cap and Min | Indicated | Current | Indicated |  |
| (1) H/F | A | 0.949 | 0.919 | 0.937 | 0.951 | 0.954 | -5.0\% |
| (2) PPA | B | 0.983 | 0.933 | 0.969 | 0.921 | 0.925 | -5.0\% |
| (3) CA | C | 1.005 | 0.926 | 0.988 | 0.883 | 0.890 | -5.0\% |
| (4) WC | D | 1.051 | 1.013 | 1.033 | 0.832 | 0.839 | -5.0\% |
| (5) CMP | E | 0.935 | 0.886 | 0.921 | 0.888 | 0.896 | -5.0\% |
| (6) MM Occurrence | F1 | 1.842 | 1.691 | 1.822 | 0.778 | 0.767 | -5.0\% |
| (7) MM CM | F2 | 1.071 | 1.351 | 1.092 | 0.835 | 0.827 | 5.0\% |
| (8) SL | G | 0.910 | 0.891 | 0.904 | 0.897 | 0.898 | -5.0\% |
| (9) OL | H | 1.045 | 1.003 | 1.042 | 0.820 | 0.816 | -5.0\% |
| (11) Spec Prop | 1 | 0.955 | 0.786 | 0.941 | 0.944 | 0.949 | -5.0\% |
| (12) Auto Phys Damage | J | 0.847 | 0.814 | 0.843 | 0.972 | 0.971 | -5.0\% |
| (10) Fidelity \& Surety | K | 0.863 | 0.979 | 0.883 | 0.921 | 0.904 | 5.0\% |
| (13) Other | L | 0.891 | 0.891 | 0.893 | 0.956 | 0.947 | -5.0\% |
| (15) International | M | 1.169 | 1.169 | 1.169 | 0.901 | 0.905 | 1.4\% |
| (16) Rein Property \& Financial | N\&P | 1.337 | 1.733 | 1.349 | 0.884 | 0.893 | 5.0\% |
| (17) Reinsurance Liab | O | 1.419 | 1.706 | 1.507 | 0.810 | 0.777 | 5.0\% |
| (18) Products Liability | R | 1.195 | 1.288 | 1.214 | 0.778 | 0.774 | 5.0\% |
| (14) Fin \& Mort | S | 1.400 | 1.400 | 1.482 | 0.916 | 0.884 | 5.0\% |
| (19) Warranty | T | 0.863 | 0.979 | 0.883 | 0.921 | 0.904 | 5.0\% |
|  |  |  |  |  |  |  | -3.7\% |

Underwriting Expense Ratio
27.5\%

| Capped Selection | $5.0 \%$ |
| :--- | ---: |
| Percentile Selected | $87.5 \%$ |
| Industry Underwriting Expense <br> OUE | $27.5 \%$ |

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Exhibit II P/C RBC Committee's Subgroup on Pricing \& Reserving Charges

Development of Capped Factors

| Line | Line <br> Letter | Current |  |  | Proposed before Cap, w/ Min |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Reserve Runoff Ratio | $\begin{gathered} \text { Reserving } \\ \text { IIO } \end{gathered}$ | Reserve Charge | Reserve Runoff Ratio | $\begin{gathered} \text { Reserving } \\ \text { IIO } \\ \hline \hline \end{gathered}$ | Reserve <br> Charge <br> Before <br> Cap, with <br> Min | Indicated Capped | Indicated <br> Capped <br> Charge |
| (1) H/F | A | 0.206 | 0.939 | 0.132 | 0.201 | 0.938 | 0.127 | 0.127 | 0.201 |
| (2) PPA | B | 0.199 | 0.927 | 0.111 | 0.124 | 0.928 | 0.050 | 0.106 | 0.192 |
| (3) CA | C | 0.238 | 0.909 | 0.125 | 0.230 | 0.911 | 0.121 | 0.121 | 0.230 |
| (4) WC | D | 0.310 | 0.835 | 0.094 | 0.338 | 0.830 | 0.111 | 0.099 | 0.324 |
| (5) CMP | E | 0.439 | 0.884 | 0.272 | 0.465 | 0.876 | 0.283 | 0.283 | 0.465 |
| (6) MM Occurrence | F1 | 0.439 | 0.869 | 0.250 | 0.217 | 0.865 | 0.053 | 0.238 | 0.431 |
| (7) MM CM | F2 | 0.283 | 0.893 | 0.146 | 0.309 | 0.883 | 0.156 | 0.153 | 0.306 |
| (8) SL | G | 0.249 | 0.901 | 0.125 | 0.164 | 0.890 | 0.050 | 0.119 | 0.257 |
| (9) OL | H | 0.478 | 0.862 | 0.274 | 0.529 | 0.852 | 0.303 | 0.288 | 0.511 |
| (11) Spec Prop | 1 | 0.184 | 0.966 | 0.144 | 0.274 | 0.966 | 0.231 | 0.151 | 0.191 |
| (12) Auto Phys Damage | J | 0.118 | 0.975 | 0.090 | 0.000 | 0.976 | 0.050 | 0.086 | 0.112 |
| (10) Fidelity \& Surety | K | 0.315 | 0.957 | 0.258 | 0.307 | 0.940 | 0.229 | 0.246 | 0.325 |
| (13) Other | L | 0.183 | 0.964 | 0.140 | 0.153 | 0.967 | 0.115 | 0.133 | 0.172 |
| (15) International | M | 0.327 | 0.877 | 0.164 | 0.327 | 0.874 | 0.160 | 0.160 | 0.327 |
| (16) Rein Property \& Financial | N\&P | 0.278 | 0.901 | 0.151 | 0.580 | 0.901 | 0.424 | 0.159 | 0.286 |
| (17) Reinsurance Liab | $\bigcirc$ | 0.750 | 0.834 | 0.460 | 1.357 | 0.838 | 0.975 | 0.482 | 0.769 |
| (18) Products Liability | R | 0.627 | 0.838 | 0.363 | 1.414 | 0.841 | 1.030 | 0.382 | 0.643 |
| (14) Fin \& Mort | S | 0.150 | 0.962 | 0.106 | 0.150 | 0.926 | 0.065 | 0.112 | 0.200 |
| (19) Warranty | T | 0.315 | 0.957 | 0.258 | 0.307 | 0.940 | 0.229 | 0.246 | 0.325 |


| Line | Line Letter | Current |  |  | Proposed before Cap, w/ Min |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Premium Loss and LAE Ratio | $\begin{aligned} & \text { Premium } \\ & \text { IIO } \end{aligned}$ | Premium Charge | Premium Loss and LAE Ratio | $\begin{aligned} & \text { Premium } \\ & 110 \end{aligned}$ | Premium <br> Charge <br> Before <br> Cap, with <br> Min | Indicated Capped | Indicated Capped Charge |
| (1) H/F | A | 0.949 | 0.951 | 0.177 | 0.919 | 0.954 | 0.152 | 0.169 | 0.937 |
| (2) PPA | B | 0.983 | 0.921 | 0.180 | 0.933 | 0.925 | 0.138 | 0.171 | 0.969 |
| (3) CA | C | 1.005 | 0.883 | 0.162 | 0.926 | 0.890 | 0.099 | 0.154 | 0.988 |
| (4) WC | D | 1.051 | 0.832 | 0.149 | 1.013 | 0.839 | 0.125 | 0.142 | 1.033 |
| (5) CMP | E | 0.935 | 0.888 | 0.105 | 0.886 | 0.896 | 0.069 | 0.100 | 0.921 |
| (6) MM Occurrence | F1 | 1.842 | 0.778 | 0.708 | 1.691 | 0.767 | 0.572 | 0.673 | 1.822 |
| (7) MM CM | F2 | 1.071 | 0.835 | 0.169 | 1.351 | 0.827 | 0.392 | 0.178 | 1.092 |
| (8) SL | G | 0.910 | 0.897 | 0.091 | 0.891 | 0.898 | 0.075 | 0.087 | 0.904 |
| (9) OL | H | 1.045 | 0.820 | 0.132 | 1.003 | 0.816 | 0.093 | 0.125 | 1.042 |
| (11) Spec Prop | 1 | 0.955 | 0.944 | 0.177 | 0.786 | 0.949 | 0.050 | 0.168 | 0.941 |
| (12) Auto Phys Damage | J | 0.847 | 0.972 | 0.098 | 0.814 | 0.971 | 0.065 | 0.093 | 0.843 |
| (10) Fidelity \& Surety | K | 0.863 | 0.921 | 0.070 | 0.979 | 0.904 | 0.160 | 0.073 | 0.883 |
| (13) Other | L | 0.891 | 0.956 | 0.127 | 0.891 | 0.947 | 0.119 | 0.120 | 0.893 |
| (15) International | M | 1.169 | 0.901 | 0.328 | 1.169 | 0.905 | 0.333 | 0.333 | 1.169 |
| (16) Rein Property \& Financial | N\&P | 1.337 | 0.884 | 0.457 | 1.733 | 0.893 | 0.823 | 0.480 | 1.349 |
| (17) Reinsurance Liab | O | 1.419 | 0.810 | 0.424 | 1.706 | 0.777 | 0.601 | 0.446 | 1.507 |
| (18) Products Liability | R | 1.195 | 0.778 | 0.205 | 1.288 | 0.774 | 0.272 | 0.215 | 1.214 |
| (14) Fin \& Mort | S | 1.400 | 0.916 | 0.557 | 1.400 | 0.884 | 0.513 | 0.585 | 1.482 |
| (19) Warranty | T | 0.863 | 0.921 | 0.070 | 0.979 | 0.904 | 0.160 | 0.073 | 0.883 |

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Risk Based Capital Subgroup on Pricing \& Reserving Charges Estimated Impact

| Line | Impact from Reserving | Impact from Premium | Hit Cap? |  | Impact Weighted on Industry Reserves and Premiums prior to covariance |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Reserve (\$) |  | Premium (\$) |  | Change (\$) |  |  |  |
|  |  |  | Res | Prem | Charge Before | Capped Charge | Charge Before | Capped Charge | Reserve | Premium | Total | $\begin{aligned} & \text { Percent } \\ & \text { Total } \\ & \text { Change } \end{aligned}$ |
| (1) H/F | -4.5\% | -5.0\% | 0 | 1 | 2,953,492 | 2,822,002 | 10,469,178 | 9,945,719 | -131,490 | -523,459 | -654,949 | -4.9\% |
| (2) PPA | -5.0\% | -5.0\% | 1 | 1 | 9,734,957 | 9,248,209 | 17,043,140 | 16,190,983 | -486,748 | -852,157 | -1,338,905 | -5.0\% |
| (3) CA | -3.8\% | -5.0\% | 0 | 1 | 3,321,565 | 3,194,046 | 2,893,708 | 2,749,022 | -127,518 | -144,685 | -272,203 | -4.4\% |
| (4) WC | 5.0\% | -5.0\% | 1 | 1 | 12,274,176 | 12,887,885 | 5,900,547 | 5,605,520 | 613,709 | -295,027 | 318,681 | 1.8\% |
| (5) CMP | 4.1\% | -5.0\% | 0 | 1 | 10,535,989 | 10,972,181 | 3,179,277 | 3,020,313 | 436,192 | -158,964 | 277,228 | 2.0\% |
| (6) MM Occurrence | -5.0\% | -5.0\% | 1 | 1 | 2,726,436 | 2,590,115 | 1,442,276 | 1,370,162 | -136,322 | -72,114 | -208,436 | -5.0\% |
| (7) MM CM | 5.0\% | 5.0\% | 1 | 1 | 2,687,358 | 2,821,726 | 1,240,399 | 1,302,419 | 134,368 | 62,020 | 196,388 | 5.0\% |
| (8) SL | -5.0\% | -5.0\% | 1 | 1 | 940,864 | 893,821 | 561,317 | 533,251 | -47,043 | -28,066 | -75,109 | -5.0\% |
| (9) OL | 5.0\% | -5.0\% | 1 | 1 | 34,523,889 | 36,250,084 | 5,302,515 | 5,037,390 | 1,726,194 | -265,126 | 1,461,069 | 3.7\% |
| (11) Spec Prop | 5.0\% | -5.0\% | 1 | 1 | 2,360,565 | 2,478,593 | 5,911,953 | 5,616,355 | 118,028 | -295,598 | -177,569 | -2.1\% |
| (12) Auto Phys Damage | -5.0\% | -5.0\% | 1 | 1 | 508,985 | 483,535 | 6,884,971 | 6,540,722 | -25,449 | -344,249 | -369,698 | -5.0\% |
| (10) Fidelity \& Surety | -5.0\% | 5.0\% | 1 | 1 | 1,255,430 | 1,192,658 | 426,696 | 448,030 | -62,771 | 21,335 | -41,437 | -2.5\% |
| (13) Other | -5.0\% | -5.0\% | 1 | 1 | 0 | 0 | 452,957 | 430,309 | 0 | -22,648 | -22,648 | -5.0\% |
| (15) International | -2.4\% | 1.4\% | 0 | 0 | 77,761 | 75,871 | 94,862 | 96,213 | -1,890 | 1,351 | -539 | -0.3\% |
| (16) Rein Property \& Financial | 5.0\% | 5.0\% | 1 | 1 | 1,190,560 | 1,250,087 | 3,041,304 | 3,193,370 | 59,528 | 152,065 | 211,593 | 5.0\% |
| (17) Reinsurance Liab | 5.0\% | 5.0\% | 1 | 1 | 18,431,554 | 19,353,132 | 3,051,823 | 3,204,414 | 921,578 | 152,591 | 1,074,169 | 5.0\% |
| (18) Products Liability | 5.0\% | 5.0\% | 1 | 1 | 6,045,715 | 6,348,001 | 568,580 | 597,009 | 302,286 | 28,429 | 330,715 | 5.0\% |
| (14) Fin \& Mort | 5.0\% | 5.0\% | 1 | 1 | 9,129 | 9,585 | 325,089 | 341,343 | 456 | 16,254 | 16,711 | 5.0\% |
| (19) Warranty | -5.0\% | 5.0\% | 1 | 1 | 55,498 | 52,723 | 145,716 | 153,001 | -2,775 | 7,286 | 4,511 | 2.2\% |
|  |  |  |  |  | 109,633,921 | 112,924,253 | 68,936,306 | 66,375,546 | 3,290,332 | -2,560,760 | 729,572 | 0.41\% |
| Percentage of Reserve/Premium Capped |  |  | 84\% | 100\% |  |  |  |  |  |  |  |  |
| Number Capped | 15 | 18 |  | 33 |  |  |  | Main Groups* | Reserve | Premium | Total |  |
| Proportion of Lines Capped | 79\% | 95\% |  | 87\% |  |  |  | HO/PPA/APD | -4.9\% | -5.0\% | -5.0\% |  |
|  |  |  |  |  |  |  | CMP/WC | CA/OL/SP/PL | 4.4\% | -4.8\% | 2.1\% |  |
|  |  |  |  |  |  |  |  | Reinsurance | 5.0\% | 5.0\% | 5.0\% |  |
|  |  |  |  |  |  |  | Medic | Malpractice | 0.0\% | -0.4\% | -0.1\% |  |
|  |  |  |  |  |  |  | *Does not in | clude all lines |  |  |  |  |


[^0]:    ${ }^{1}$ The American Academy of Actuaries ("Academy") is a 16,000 -member professional association whose mission is to serve the public on behalf of the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

[^1]:    Enclosure

